<u>In the Claims</u>

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("——"), as is applicable:

1-12. Cancelled.

13. (Previously presented) A piezoelectric resonator, including:

a resonating member having a bi-directionally adjustable resonance frequency, said resonating member including:

a semiconductor material of a semiconductor-on-insulator wafer, the semi-conductor-on-insulator wafer including an oxide layer adjacent to the semiconductor material and a handle layer adjacent to the oxide layer, the oxide layer disposed between the handle layer and the semiconductor material;

an electrode;

a piezoelectric material disposed between the semiconductor material and the electrode; and

a capacitor created by the semiconductor material and the handle layer separated by an air gap formed out of the oxide layer, wherein the capacitor is configured to receive a direct current voltage that adjusts the resonance frequency of the resonating member.

14. Cancelled.

15. Cancelled.

16. Cancelled.

17. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a beam configuration that ranges between approximately 2400-6200 for resonance frequencies ranging between approximately 1.72 megahertz –6.7 mega-hertz.

18. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a beam configuration that ranges between approximately 3000-6200 for resonance frequencies ranging between approximately 1.72 megahertz – 4.87 mega-hertz.

19. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a beam configuration that ranges between approximately 5300-6200 for resonance frequencies ranging between approximately 1.72 megahertz –3.29 mega-hertz.

20. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a beam configuration that ranges between approximately 5400-6200 for resonance frequencies ranging between approximately .721 megahertz – 1.72 mega-hertz.

21. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a block configuration that ranges between approximately 5500-11,600 for resonance frequencies ranging between approximately 16.9 megahertz – 195 mega-hertz.

22. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a block configuration that ranges between approximately 4700-11,600 for resonance frequencies ranging between approximately 16.9 megahertz – 195 mega-hertz.

23. (Previously presented) The piezoelectric resonator of claim 13, further including, in response to an excitation force applied to the resonating member, a quality factor for a block configuration that ranges between approximately 4500-11,600 for resonance frequencies ranging between approximately 16.9 megahertz – 195 mega-hertz.

24. (Original) The piezoelectric resonator of claim 13, wherein the semiconductor material, the electrode, and the piezoelectric material are configured in one of a beam configuration and a block configuration.

25. (Original) The piezoelectric resonator of claim 13, wherein the electrode includes one of a sense electrode and a drive electrode.

26. (Original) The piezoelectric resonator of claim 25, wherein the sense electrode and the drive electrode are separated by the piezoelectric material.

27. (Original) The piezoelectric resonator of claim 25, wherein the sense electrode and the drive electrode are separated by the surface of the semiconductor material.

28. (Original) The piezoelectric resonator of claim 13, wherein the thickness of the semiconductor material ranges between approximately 0.2-30 microns.

29. (Original) The piezoelectric resonator of claim 13, wherein the piezoelectric material includes one of zinc oxide, aluminum nitride, and lead zirconate titanate.

30. (Original) The piezoelectric resonator of claim 13, wherein the semiconductor material includes one of silicon, germanium, single crystal semiconductor material, polycrystalline semiconductor material, and amorphous semiconductor material.

31. (Original) The piezoelectric resonator of claim 13, further including an adhesion layer disposed between the piezoelectric material and the semiconductor material.

32. (Previously presented) The piezoelectric resonator of claim 13, wherein the resonating member includes a resonance frequency resulting from at least one of in-plane and out-of-plane movement of the resonating member.

33. (Previously presented) A communications device, including:

a receiver; and

a piezoelectric resonator disposed in the receiver, the piezoelectric resonator including:

a resonating member having a bi-directionally adjustable resonance frequency, said resonating member including:

a semiconductor material of a semiconductor-on-insulator wafer, the semi-conductor-on-insulator wafer including an oxide layer adjacent to the semiconductor material and a handle layer adjacent to the oxide layer, the oxide layer disposed between the handle layer and the semiconductor material;

an electrode;

a piezoelectric material disposed between the semiconductor material and the electrode; and

a capacitor created by the semiconductor material and the handle layer separated by an air gap formed out of the oxide layer, wherein the capacitor is configured to receive a direct current voltage that adjusts the resonance frequency of the resonating member.

34. (Original) The communications device of claim 33, wherein the piezoelectric resonator is configured as at least one of a filter and a frequency reference device.

35. (Original) The communications device of claim 33, further including a transmitter.

36. (Original) The communications device of claim 35, wherein the transmitter includes a second piezoelectric resonator, wherein the second piezoelectric resonator is configured as at least one of a filter and a frequency reference device.

37. (Previously presented) The piezoelectric resonator of claim 13, further including a capacitor created by a second electrode disposed adjacent to the piezoelectric resonator and separated by a gap, wherein the capacitor is configured to receive a direct current voltage to adjust the resonance frequency of the resonating member.

38. (Previously presented) The piezoelectric resonator of claim 13, wherein the oxide layer is a thin film layer of a thickness ranging between and including 0.1 – 5 microns.